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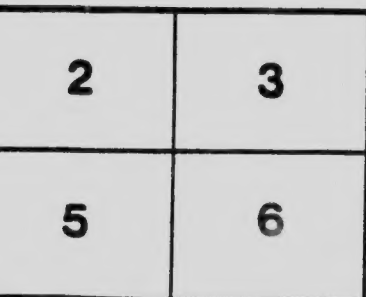
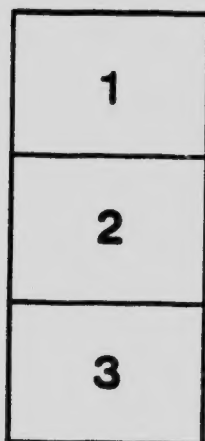
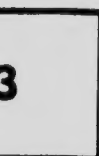
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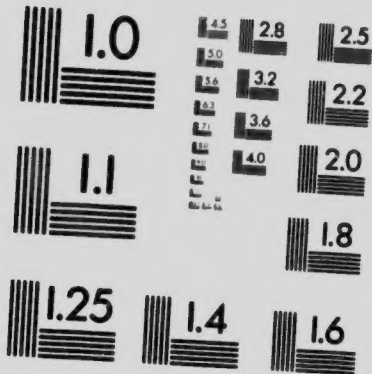
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MANITOBA AGRICULTURAL COLLEGE

How to Preserve Eggs

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Leading Points

- 1.—It is a matter of domestic economy to preserve eggs in the summer for winter use.
- 2.—Eggs for preserving can usually be bought cheapest during June and the early part of July.
- 3.—The sooner the eggs are put in the preservative after laying, the better.
- 4.—Eggs for preserving should be fresh, clean, uncracked, unwashed, and untainted.
- 5.—A five gallon crock is the best container.
- 6.—Candle all eggs before putting them down; all unsuitable eggs are thus detected.
- 7.—Limewater and water glass solution are two of the best preservatives, and directions for their use are contained herein.

IN SUMMER, when eggs are low in price, every household has a good supply for table use; but in winter the high price simply makes it impossible for the ordinary household to use eggs. To overcome this difficulty, the housewife can preserve them in the summer time, and have a good supply for winter use at a reasonable price. Not knowing how to go about it, what kind of preservative to use, or how to prepare it, prevents many from "putting down" eggs. Many housewives would put some down if they felt sure that the eggs would keep reasonably well.

The object of this circular is to give the housewife the necessary information on preserving eggs for home use; the kind of eggs to use; the best preservative, and the best time and best way to put them down.

There is special need for this information at this time, in view of the fact that all food products are very high in price, and are still going up. Eggs are no exception; in fact, the increase in price is even more noticeable in eggs than in any other food product. Owing to their perishable nature, eggs deteriorate more quickly, and spoil more easily than most of the other articles of diet. These facts are readily seen in the quality of the eggs when they reach the consumer's table. The losses from the time the eggs are produced on the farm until they reach the consumer, are also much heavier than those of other food products. These points have a direct bearing on the price of eggs. The scarcity of eggs during the fall and winter season has even a greater influence on the price. In the summer, the natural season of production, there is always a good supply of eggs, and the prices are usually one-half to one-third lower than in the winter. In lowering the cost of living, the shrewd housewife can take advantage of this and buy her eggs in the summer and preserve them for winter use. The "fresh" egg, of course, is in a class by itself, and no one should expect a preserved egg to come out with a preservative in quite as good condition as it was when put in. There always will be a slightly stale flavor present which is not found in a new laid egg.

Time to Preserve.

The price of eggs is usually lowest during June and the early part of July. They are not quite so good in keeping quality as March or April eggs, but, properly preserved, they will come out of the preservative in the winter fit for any table. The egg shell is porous, and the warmer the weather the greater the evaporation, which lowers the quality. Warm weather eggs, as a rule, do not stand shipping quite so well as the earlier eggs, and the losses are usually a little heavier. To offset this is the fact that the later eggs are so much cheaper.

The Class of Eggs.

The older the egg, the greater the evaporation and the poorer the keeping quality. This means the sooner the eggs are put in the preservative after they are laid the better. A new laid egg will keep far better than old or stale eggs.

a liquid preservative in a fresher condition than if kept by any other method of preserving.

Lime Water Method.

In making the lime water solution it is important that good fresh lime be used. Use two pounds of fresh lime and slake in a barrel or tub by adding about two gallons of water. After the lime is properly slaked sufficient water is added to make five gallons of solution, which will be sufficient liquid to preserve thirty or forty dozen eggs. After slaking it, the solution is allowed to settle. After it has settled, it is stirred up again. This is repeated a few times, after which the clear liquid only is poured off into the crock. The best plan is to put about six or eight inches of the solution in the crock before putting in any eggs. By doing this, there is less danger of cracking any of them. The liquid tends to lift them slightly. The eggs need not be put in in any special way. The crock should be filled with eggs up to within two inches of the top. The crock should set level and then be filled right up to the top with the liquid. Put in enough so it is just on the point of running over. After this is done melt about four ounces of paraffin, and pour it on the top. This cools and hardens and forms an air tight covering which prevents any evaporation.

By first boiling the water used in slaking the lime its preserving qualities may be slightly improved.

Water Glass Method.

The water glass method of preserving is probably a little less troublesome than the lime water method, but the material costs more. For the average housewife this is easier to prepare than the lime water. In experimental work on the Poultry Department of the Manitoba Agricultural College this preservative did not give quite as good satisfaction as the lime water. The eggs were all the same age and quality, put down at the same time, and kept under the same conditions. The lime water eggs were better in flavor and came nearer in quality to the new laid eggs than those in water glass.

The water glass can be procured at any drug store at about fifteen cents for a pound tin. It is a thick, clear liquid which becomes thinner when warmed. The method of preparing this preservative is usually printed on the container. The common practice is to mix one part of water glass to ten parts of water, the water previously boiled. It is best to have the water luke warm when adding the water glass. The solution should be cooled properly before putting in any eggs. The method of filling and sealing the crock should be the same as in the lime water method. When taking out the eggs there is likely to be considerable sediment in the bottom of the crock. Usually the eggs lying in this are not as good as those in the clear portion of the liquid. This solution cannot be used a second time.

should be culled out even though the air space may be small. Such eggs are usually fertile, and show the effects of a broody hen setting on them. Warm weather conditions with the temperature as high as 80 degrees F. for four hours will cause eggs to go the same way. In such eggs the germ has started to grow, and they are not likely to keep in the preservative. Under farm conditions each day's eggs can be put in the crock as they are laid until the crock is filled. Under city conditions it is almost impossible to get new laid eggs, and, therefore, the quality of those put down would hardly be as good as on the farm. However, the average city consumer should be able to get eggs with air spaces not larger than a twenty-five cent piece and yolks that are only slightly visible. Such eggs will keep all right if put down properly.

The proper way to candle an egg is to hold it to the light with the large end up. It should be held with the thumb and forefinger touching the sides of the egg and not the ends. By holding it in this way the candler can easily see the air space at the top, and at the same time the egg can be given a sharp turn to make the yolk float about. By doing this any blood spots or foreign matter in the egg can be detected easily.

Preservatives.

Having secured the supply of eggs and the container, the next thing is to prepare the preservative. There are quite a few different ways of preserving, but the main points about any one of them is the "freshness" in which it will keep the eggs, and the cost of it.

Bran, oats and salt are old time preservatives. In these the eggs usually become musty, evaporate considerably and the yolks stick to the sides of the shell. Where these are used, the conditions under which the eggs are kept must be exceptionally good as to even temperature and dryness. At best the eggs will not come out in a very palatable condition. Wrapping each egg tightly in paper, and setting them away in a cool, dry place in the cellar is another method sometimes followed. Here, again, there is too much evaporation, and the eggs go off in flavor as well. Covering with a coat of lard or vaseline is not to be recommended, for similar reasons. Eggs preserved this way take on a distinctly foreign flavor. The process of dipping or immersing eggs in boiling water a few seconds is sometimes recommended. Eggs preserved in this way will keep but little better than those not treated at all. Eggs kept in cold storage usually show more evaporation than those kept in a liquid preservative. The white of the egg also seems to go a little more watery and they usually have a somewhat bitter flavor. To keep the eggs best in cold new cases, new, clean and dry fillers should be used.

Liquid preservatives seem to clog up the pores of the eggs more effectively than any other method of preserving, and at the same time they prevent evaporation and outside contamination. If the eggs put down are all in good condition, the materials used properly prepared, and the container placed in a cool place, they will come out of

The whole theory of preserving eggs is to clog up the pores of the shell so as to prevent evaporation, and also hinder germs from getting in. To do this effectively, the eggs must be clean and also sound in shell. Dirt of any kind on the outside of an egg is likely to cause mold growth inside, and a rotten egg is the result. The egg should be as near the natural untainted condition and as fresh as possible. Eggs should not be washed, as this removes the mucilaginous covering or "bloom" which forms the protective covering against outside contamination.

Vessels to Use.

A wooden pail or earthen crock is the best kind of container to use for preserving eggs. Galvanized iron pails or tubs **are not suitable** and should not be used because they rust. A five gallon crock is the most suitable container to use. Such a size will hold about two hundred eggs. When larger quantities are required, it is usually better to get two or more crocks of this size rather than to use only one of the larger sizes. If the eggs are put in the five gallon size, it will take less time to empty the vessel in the winter than if a larger crock were used, and the danger of spoiling is also lessened. Should anything go wrong with the preservative, only a small, instead of a big, lot would be spoiled. In a smaller crock the lower eggs are also less likely to be crushed by the weight of the others on top. Whatever container is used it should first be thoroughly sealed and cleaned.

Preparing the Eggs.

Use only eggs that are absolutely sound in shell and free from dirt. Under no condition should eggs be put in a preservative without first candling. Often this is neglected with the result that the whole lot of eggs is spoiled. One cracked or broken egg in a crock is likely to spoil the whole lot.

How to Candle or Test Eggs.

Testing or candling eggs by sunlight instead of using a lamp makes the work far easier. A room having one window on the south side is best suited for the work. This room should be darkened by tacking a piece of dark oil cloth over the window or windows. Then cut a hole in the cloth the size of an egg. Each egg is held up to this hole and the sun shining on it will enable the candler to see the condition of the egg. The best egg for preserving has a small air space at the large end, the yolk is only slightly visible. As the egg gets older, the air space increases in size, due to evaporation, and the yolk becomes more cloudy and easier to see. The white also becomes thinner and more watery, thus making the yolk more visible. Cracked eggs can also be detected readily. These should be culled out as well as all eggs showing very large air spaces and quite cloudy yolks. In a new laid egg the air space is usually about the size of a five or ten cent piece. An egg having an air space one-half inch in depth should not be put in a preservative. All eggs with heavy or cloudy yolks

Lime and Salt Solution.

In comparing the quality of eggs preserved by this method with those preserved by either the lime water or water glass method, they were found to be inferior. The quality of the eggs preserved by the three different methods was certainly in favor of the lime water system. The water glass eggs were second, with the lime and salt solution eggs last.

This preservative can be made by simply adding one pound of salt to the lime water solution prepared as previously outlined. What has been said regarding putting the eggs in the other preservatives holds good here.

Eggs taken out of any of these three preservatives will show but little evaporation. The white or albumen will be more watery, and the yolk more cloudy than in a new laid egg. To prevent the eggs from cracking when boiling, the large end should be pierced with a pin. This will let the air escape, and permit the contents to expand while being boiled.

The common reasons for eggs not keeping in these preservatives are:

1. Poor quality when put down;
2. Carelessness in putting them down;
3. Poorly prepared preservative;
4. Keeping them in too warm a place.

By paying special attention to these points, a supply of good eggs can be had for use eight or ten months hence.

